Session Title: Computer Science

LISTEN/JAVA: A TOOL TO INVESTIGATE THE USE OF SOUND FOR THE ANALYSIS OF PROGRAM BEHAVIOR

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September 14, 2002

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Abstract

We describe the architecture and use of a tool named LISTEN. This is a general-purpose tool to instrument computer programs so that during execution, aspects of program behavior can be mapped to audible sound. Ongoing research aimed at investigating the usefulness of sound in various programming-related tasks, and a lack of supporting tools led to the development of LISTEN. Our work so far has focused on extending LISTEN for use with Java code, so further research can be done in the auralization of Object Oriented programs. This tool is expected to find use in tasks such as program testing and debugging, development of programming environments for the visually handicapped, data analysis using aural cues, and for research in novel approaches to music composition.